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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,254	08/24/2001	Nobuhiro Yabunouchi	209359US0	2238
22850	7590	01/21/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			BROWN, JENNINE M	
			ART UNIT	PAPER NUMBER
			1755	

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/914,254

Applicant(s)

YABUNOUCHI ET AL.

Examiner

Jennine M. Brown

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-39 is/are pending in the application.
- 4a) Of the above claim(s) 2,5,6 and 15-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7-11,13 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

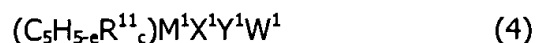
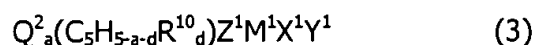
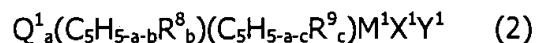
### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Election/Restrictions***

The reply filed on 10/24/2003 acknowledges the election of claims 1, 3-4 and 7-14 but the current amendment has cancelled claim 12 and incorporated the subject matter into claim 1. Claims 2, 5-6 and 15-39 remain withdrawn from consideration as being directed to a non-elected invention. Claims 1, 3-4, 7-11 and 13-14 now constitute the elected invention.

The traversal on the grounds that the examiner has not identified the particular species is inadvertent because the office action of 07/02/2003 requested species 1-6 be elected, examiner meant to have applicants elect one of the following which are in currently amended claim 1:



Applicant is required under 35 U.S.C. 121 to elect a single ultimate species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent for or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after

the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Regarding the restriction requirement, the traversal on the grounds that the examiner has not carried the burden of proving any material reasons or examples to support Groups I-IV are patentably distinct and unrelated is unfounded. Reasons were previously given on pages 2-3 of the previous office action for why the groups were independent and distinct. A mere broad allegation that the requirement is in error does not comply with the requirement of 37 CFR § 1.111. Regarding applicant's argument that there is no burden on the examiner to examine all claims, although the same classes and subclasses were cited the additional claims involve different questions of patentability. Applicants have failed to pointed out any error in the

restriction requirement presented by Examiner, therefore the restriction requirement is still deemed proper and is therefore made FINAL, but the election of species is non final.

A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

### ***Specification***

Examiner has entered Applicants amendment, which obviates Examiners previous objection, therefore the objection has been withdrawn.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 4, 7-11, 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuber, et al. (US 5786432 A).

Kuber, et al. discloses a transition metal compound such as zirconium or hafnium metallocene, an oxygen containing compound represented by an alkylaluminumoxane compound, a compound of (C) called the co-catalyst and optionally an alkylating agent which can also be the alkylaluminumoxane or methyl lithium or  $AlCl_3$ . (formula I; formula II a or b; col. 2, l. 66 – col. 4, l. 11; col. 9, l. 37 – col. 10, l. 62; Example H).

Claims 1, 3, 4, 7-11, 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Starzewski, et al. (WO 98/01485 A1).

The equivalent of this document is Starzewski, et al. (US 6191241 B1).

Starzewski, et al. discloses a transition metal compound such as titanium or zirconium metallocene, an oxygen containing compound represented by an alkylaluminumoxane compound, a compound of (C) called the poorly coordinating anions and optionally an alkylating agent which can also be alkylaluminumoxane or methaluminumoxane. (Examples 8, 9, 10, 11, 14, 18, 19, 20, 21, 22, 23, 25, 26, 27, 29, 30; col. 2, l. 14 – col. 3, l. 60; col. 5, l. 31 - col. 6, l. 8; Formulae (XIa-d); col. 9, l. 57 – col. 10, l. 59; col. 13, l. 29-49; Formulae XII; col. 21, l. 32-34).

Claims 1, 3, 4, 7-11, 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Zambelli, et al. (US 6271313 B1).

Zambelli, et al. discloses a transition metal compound such as titanium or zirconium metallocene, an oxygen containing compound represented by an alkylaluminumoxane compound (8 or 9), a compound of (C) called the co-catalyst  $(Z^+B^{\prime\prime\prime})_4$  and optionally an alkylating agent which can also be an alkylaluminumoxane or free  $Al(CH_3)_3$ . (col. 2, l. 18-27; col. 4, l. 9-30; col. 5, l. 66 – col. 6, l. 7; col. 6, l. 31-33, 38-39; col. 14, l. 30-42, 52-64; col. 15, l. 1-37; col. 17, l. 12-20, 31 – col. 19, l. 50; See Examples).

Claims 1, 3, 4, 7-11, 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuber, et al. (US 6242544 B1).

Kuber, et al. discloses a transition metal compound such as zirconium or hafnium metallocene, an oxygen containing compound represented by an alkylaluminumoxane compound, a

compound of (C) called the co-catalyst and optionally an alkylating agent which can also be alkylaluminumoxane. (formula I; formula II a or b; col. 3, l. 8 – col. 6, l. 33; col. 9, l. 8-61; col. 10, l. 20-28; col. 11, l. 30-32 and especially l. 53-65; col. 12, l. 29-32; Example H).

Claims 1, 3, 4, 7-11, 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Starzewski, et al. (US 6191241 B1).

Starzewski, et al. discloses a transition metal compound such as titanium or zirconium metallocene, an oxygen containing compound represented by an alkylaluminumoxane compound, a compound of (C) called the poorly coordinating anions and optionally an alkylating agent which can also be alkylaluminumoxane or methaluminumoxane. (Examples 8, 9, 10, 11, 14, 18, 19, 20, 21, 22, 23, 25, 26, 27, 29, 30; col. 2, l. 14 – col. 3, l. 60; col. 5, l. 31 - col. 6, l. 8; Formulae (XIa-d); col. 9, l. 57 – col. 10, l. 59; col. 13, l. 29-49; Formulae XII; col. 21, l. 32-34).

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3, 4, 7-11, 13-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Patent No. 6107232 (Yokota, et al.). Although the conflicting claims are not identical, they are not

patentably distinct from each other because all of the main components of the catalyst as well as the use for copolymerization of olefins and styrenes are claimed. Patent claim 1 recites a polymerization catalyst with a transition metal compound, an alkylaluminumoxane which appears in claim 4 (formula IV) and claim 5 (formula V) and the activation co-catalyst (C) which is a Lewis acid (claims 6 and 12).

Yokota et al. differs from the claimed invention in the failure to claim the optional alkylating agent.

It would have been obvious to one of ordinary skill in the art to modify the catalyst of Yokota et al. to use an optional alkylating agent because this would increase the longevity of the catalyst. The claimed Lewis acid is a genus for the species claimed in the instant application.

Claims 1, 3, 4, 7-11, 13-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 9-12 of U.S. Patent No. 6255244 B1 (Yabonouchi et al.). Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the components of the catalyst as well as the use for polymerization of olefins and styrenes are claimed. Claim 1 recites a catalyst with a transition metal compound, an oxygen containing compound, compound to form an ionic complex (c1) and optional alkylating agent, where the specific organometallic complexes appear in claims 10 and 11.

Yabonouchi et al. differs from the claimed invention in the failure to claim the specific oxygen containing compound and specific compound used to form the ionic complex (C).

It would have been obvious to one of ordinary skill in the art that the patented claims recite the species of the genus claimed in the instant application.



### ***Response to Arguments***

Applicant's arguments filed on 10/29/2003 have been fully considered but they are not persuasive.

The amendment to the claims has served to clarify the type of transition metal compound, oxygen containing compound and alkylating agent but has not overcome the prior art, rather clarified the record by indicating the representative structure is an alkylaluminum complex and not a silane based complex. Furthermore, the co-catalyst is represented by compound (C) not the aluminum compound as previously assumed by the examiner.

1. 102 Rejection – Zambelli

The transition metal compound, oxygen containing compound, co-catalyst (C) and alkylating agent were disclosed by Zambelli, et al. Examiner has re-presented the argumentation supra, based on the amended claims. Applicants arguments were not persuasive.

2. 102 Rejection – Kuber

The transition metal compound, oxygen containing compound, co-catalyst (C) and alkylating agent were disclosed by Kuber, et al. Examiner has re-presented the argumentation supra, based on the amended claims. Applicants arguments were not persuasive and the rejection stands.

3. 102 Rejection – Starzewski

The transition metal compound, oxygen containing compound, co-catalyst (C) and alkylating agent were disclosed by Starzewski et al. Examiner has re-presented the argumentation supra, based on the amended claims. Applicants arguments were not persuasive and the rejection stands.

4. 103 Rejection – Ishihara

Applicant's arguments regarding the Ishihara, et al with respect to claims 1, 3, 4 and 12 have been fully considered and are persuasive. The rejection has been withdrawn.

Finally, if applicant believes that one or more dependent limitations are critical to the invention, then applicant should amend the claims to reflect such critical limitations as well as indicate where in the specification such critical limitations were discussed and demonstrated. The limitations of all claims have been considered and are deemed to be within the purview of the prior art.

5. Obviousness Double Patenting – Yokota

Examiner disagrees with Applicants assertion that the claims do not recite component (C). Examiner has re-presented the argumentation to clarify that the claimed invention encompasses the claims of the instant invention because it is a species of the genus claimed in Yokota. Applicants arguments were not persuasive and the rejection stands.

6. Obviousness Double Patenting – Yabonouchi

Examiner disagrees with Applicants assertion that the claims do not recite component (C). Examiner has re-presented the argumentation to clarify that the claimed invention encompasses the claims of the instant invention because it is a species of the genus claimed in Yabonouchi. Applicants arguments were not persuasive and the rejection stands.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennine M. Brown whose telephone number is (571) 272-1364. The examiner can normally be reached on M-F 8:00 AM - 6:00 PM; first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on (571) 272-1362. The fax phone number for the examiner where this application or proceeding is assigned is (571) 273-1364.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1200.

jmb

A handwritten signature in black ink, appearing to read 'Elizabeth D. Wood', written in a cursive style.

**ELIZABETH D. WOOD  
PRIMARY EXAMINER**